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UNDERSTANDING THE EFFECT OF COVID-19 ON THE EDUCATION SYSTEM AND THE STUDENTS IN INDIA

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Abstract— **This study was intended to examine the effect of COVID-19 on students and education system in Bangalore region of India. This study included the following objectives; to evaluate the affect of pre and post COVID-19 virus situation among students in India, to examine the impact of COVID-19 on education system in India. The questionnaire format of Google forms was applied in order to collect data. Primary data source was used and data was analyzed using the chi square statistical tool at 5% level of significance which was presented in frequency tables and percentages. The respondents under the study were 355 students of undergraduate and post graduate level in India. The study findings revealed that COVID-19 pandemic has a significant impact on the education in India.**

Keywords— **Pandemic, Education, COVID-19, impact, lockdown, virus, India**

I. INTRODUCTION

Past few months the world has seen most disturbing and uncertain scenarios with the outbreak of COVID-19 virus. The pandemic has affected all sectors of human life and so does it has affected the educational system. With the current uncertain scenarios there has been a plenty of challenges for educational sector from planning and linking to educational objectives, need of motivational activities during these times, taking a look at student's profile, difficulty in validation of effectiveness and relevance of the course, lack to accessibility, preparation of online setup, deployment of staff, lack of concentrated learning environment to stresses related to daily institutional changes. But on the same time it provided us with pooled resources and opportunities to transform learning to more digital platform and flipped classroom type (Bloom, Reid, & Cassady, 2020) (Agnoletto & Queiroz, 2020). Some basic shift in solutions involving consideration of students need, multiple platform of delivery, change in teacher training, more collaborative system between teachers and parents, using the asynchronous learning tools, constant follow-ups, feedbacks and monitoring the reach of the course, attitude of empathy, giving varied assignment with keeping in mind the curriculum, expansion of online learning and technology based learning in tertiary education with a thought towards the aftermaths (Dreesen, et al., 2020) (Daniel, 2020). (Neupane, Maharjan, & Bhuju, 2020) Showed that how various universities and higher education institutes of different counties displayed the relevant information about covid19 situation on their website and help increase the awareness among the students, development of app, reducing and keeping a step towards more stressful and uncertain situations (Timmers, Janssen, Stohr, Murk, & Berrevoets, 2020) (Annarumma, Vitale, Sessa, & Tedesco, 2020). With these basic solutions coming in play, more advanced prepositions has been suggested by (Lewin, 2020)

1. Structuring the organising and financing and mass education systems as same as before COVID-19.
2. Lower income and lower middle income families will be the one effected the most, making them have educational financing more difficult to handle.
3. Education systems after reopening should build themselves for any such uncertain situations.
4. This global pandemic showed the importance of health care system and education.
5. Non-state providers shall develop plans for new economics of private school operations.
6. Children currently not able to attend the school and online education should not be considered out of school and will be given chance after the gradual reopening of schools.
7. Teachers must be seen as the key workers of the educational institutes and should be provided with valuable resources.
8. Sustainable Development goals to be kept in mind all along this situation and should be revisited again.

Where in most of the developing countries having luxuries of digital and technological advancement is not possible, which in turn leads it to the educational inequality gap. The digital and online prospect instead of being a solution may turn out to be a bane (Tumwesige, 2020) although the students engaged in online educational activities found it useful and encouraging; still they find themselves in stress situations and

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in position of depression, anxiety and fear. It is mostly because of the uncertain situation, fear of unemployment, additional involvement in games and media, lack of social communication and low confidence (Karthick, 2020). The situation has become so worse in some reason that it has made students to take their own life because of lack of facilities and similar problems (Lathabhavan & Griffiths, 2020)

Then (Grandisoli & Jacobi, 2020) suggested how this pandemic situation can affect the educational institute that it may turn into institute dedicated to research and provide a utilitarian and pragmatic prospective. Now with the better understanding of the situation and needs of educational sector the ministry should take relevant steps to solve the problem (Upoalkpajor & Upoalkpajor, 2020). The study aims to study the effect of lockdown on the student's education pre and post lockdown and how it influenced the engagement of students in other activities.

Educational Qualification	Number of Students	How Covid-19 affecting the education?			Preference of Education system		Total of each parameter
		Positive	Negative	Neutral	Regular	Online	
Under graduate	308 (86.8%)	23	189	96	280	28	308
Post graduate	47 (13.2%)	6	27	14	43	4	47
Total	355						355

II. METHODOLOGY

Table 1.1: Shows the total data sample with 308 under graduate students and 47 Post graduate students. Also the opinion of students about the effect of Covid-19 on their education and their preference of education system has been reflected.

A sample of 355 students, including both (308) undergraduate and (47) post graduate students has been collected from Bangalore region of India. Bangalore is India's third largest city also known as the silicon valley of India, it contribute eight million to the population of India with this population being multi ethnic and diverse in nature. Students undertaking education in Bangalore belongs to different states and cultural background; this will be a pro to the study in terms of variety of thoughts and cultural background. The student volunteered for study majorly belonged to science and humanities stream of education. The method of data collection was Google forms questionnaire format with questions related to educational situation pre and post COVID-19 lockdown, following questions were asked as parameters of the questionnaire: 1) Educational qualification of student 2) How interactive they found the classes at college? 3) The level of technological involvement in classes at college? 4) What is the level of understanding at college? 5) What is the level of doubt clearance at college? 6) How interactive they found the online classes? 7) The level of technological involvement in online classes? 8) What is the level of understanding in online classes? 9) What is the level of doubt clearance in online classes? 10) The type of activities they were involved in college? 11) The type of activities they are adopting at home? 12) Preference of Educational system. 13) Impact on the education. A subcategory of involvement of students in extracurricular activities at college and home has also been recorded to see what leads the students to adopt regular teaching over digital platform. Chi square test has been run on the data of educational situation of students, to understand the differences between chosen parameters of the student population in pre and post lockdown conditions using the SPSS- 17 statistical tool.

III. EXPERIMENT AND DATA ANALYSIS

The following results have been obtained through the statistical analysis:

Table 1.1: Shows the total data sample with 308 under graduate students and 47 Post graduate students. Also the opinion of students about the effect of Covid-19 on their education and their preference of education system has been reflected.

Showing the total sample strength of students and the distribution based on education. 86/8% of Undergraduate students took the survey with 13.2% of post graduation students/

Table 1.2: Shows the level of interactive sessions, levels of technological involvement, levels of understanding and the levels of doubt clearance in college.

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Educational Qualification	How interactive they found the classes at college?				Level of technological involvement in classes at college?				Level of understanding of classes at college?				Level of doubt clearance in classes at college?				Total of each parameter
	High	Average	Below Average	Low	High	Average	Below Average	Low	High	Average	Below Average	Low	High	Average	Below Average	Low	
Under graduate	135	147	19	7	92	185	21	10	137	131	24	16	137	131	24	16	308
Post graduate	25	14	7	1	11	30	3	3	26	16	4	1	26	16	4	1	47

Table 1.2: Shows the level of interactive sessions, levels of technological involvement, levels of understanding and the levels of doubt clearance in college.

Educational Qualification	How interactive they found the online classes?				Level of technological involvement in online classes?				Level of understanding in online classes?				Level of doubt clearance in online classes?				Total of each parameter
	High	Average	Below Average	Low	High	Average	Below Average	Low	High	Average	Below Average	Low	High	Average	Below Average	Low	
Under graduate	43	166	66	33	160	111	25	12	49	182	52	25	62	151	60	35	308
Post graduate	6	17	16	8	29	15	2	1	4	29	8	6	6	24	9	8	47

Table 1.3: Shows the level of interactive sessions, levels of technological involvement, levels of understanding and the levels of doubt clearance in online classes.

The tables from 1.1 to 1.3 shows the data distribution and what students based on their educational qualifications experienced pre and post lockdown and shift in online education, what they observed and what is their choice of preference for classes. The tables from 1.4 to 1.7 shows the comparison of their rating of levels from pre and post lockdown based on their engagement in class, technology involvement, and understanding of subject and doubt clearance of subject. Table 1.8 shows the activities students involved in college and how it shifted to different activities at home during lockdown. Sudden changes have affected the education system and students in India.

Level of Interactive Session in College	Level of Interactive Session in online classes				
Parameters	High	Average	Below Average	Low	Total
High	26	83	40	11	160
Average	21	87	36	17	161
Below Average	2	12	5	7	26
Low	0	1	1	6	8
Total	49	183	82	41	355

Table 1.4: Shows the difference in parameters among students about the interactive session of class pre and post lockdown.
P value (Asymp. Sig. 2 sided) = .000 shows significant difference in parameter before and after the lockdown education

Table 1.5: Below shows the difference in parameters among students about technology involvement in class pre and post lockdown.
P value (Asymp. Sig. 2 sided) = .000 shows significant difference in parameter before and after the lockdown education.

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Level of Technology Involvement in College	Level of Technology Involvement in online classes				
Parameters	High	Average	Below Average	Low	Total
High	68	30	4	1	103
Average	102-	86	20	7	215
Below Average	14	7	2	1	24
Low	5	3	1	4	13
Total	189	126	27	13	355

Level of Understanding in College	Level of Understanding in online classes				
Parameters	High	Average	Below Average	Low	Total
High	30	90	19	9	148
Average	15	107	31	13	166
Below Average	6	11	8	4	29
Low	2	3	2	5	12
Total	53	211	60	31	355

Table 1.6: Shows the difference in parameters among students about level of understanding in class pre and post lockdown.
P value (Asymp. Sig. 2 sided) = .000 shows significant difference in parameter before and after the lockdown education.

Level of Doubt Clearance in College	Level of Doubt Clearance in online classes				
Parameters	High	Average	Below Average	Low	Total
High	31	73	34	24	163
Average	29	77	27	14	147
Below Average	4	15	5	4	28
Low	3	10	3	1	17
Total	67	175	69	43	355

Table 1.7: Shows the difference in parameters among students about Level of doubt clearance class pre and post lockdown.
P value (Asymp. Sig. 2 sided) = .876 shows no significant difference in parameter before and after the lockdown education

Type of Activity involvement in College	Type of Activity involvement at home				
Parameters	Exercise	Reading	Social Media	None	Total
Sports	21	7	6	9	43
NCC	1	2	1	3	7
NSS	5	6	3	10	24
Cultural Forum	34	14	15	34	97
Other Forum	26	13	12	29	80
None	40	17	8	39	104
Total	127	59	45	124	355

Table 1.8: Shows the difference in type of activity involvement pre and post lockdown.
P value (Asymp. Sig. 2 sided) = .606 shows no significant difference in parameter before and after the lockdown education.

IV. RESULT AND DISCUSSION

The results show that although all the students felt similar changes in the educational shift from regular classes and online classes, still they preferred the regular system of delivery. The data analysis clearly showed the shift in assessment from high to average regarding instructive sessions and understanding from college to online classes. The shift did not show an extremity but a variable of high value to average; this has to be taken into consideration that not all students are usually attentive in class weather it's at college or online. Whereas the assessment about technology involvement showed opposite variation with shift from average in college to high in online classes. Students must be overshadowed by the use of online teaching platforms while making the choice.

The engagement of students at various activities at college such as cultural forum, NCC, NSS, Sports and others gave a insight about the curriculum of the course, how education is not only about the delivery of content but also learning other skills and life lessons through the inclusion of these activities. Students participating in these ventures are actively involved in the development of skills like leadership, honesty, group learning, coordination etc which contribute to overall development of a student. Whereas the data also showed the involvement of students in more self development activities at home such as reading, exercising but with a major chunk focused on social media and doing nothing. The activities like reading and exercising not consuming the major time frame of the leisure time students have, results in indulging in social media which gives a feeling of being around friends but not in real scenario and ultimately feeling more unsatisfied mentally exhausted.

The major reason behind the choice of regular classes by students could be the participation in various ventures at college apart from the curriculum, including the sports, cultural and social interactions. The online classes shall be included with activities with group engagement for the students to feel as involved in other curriculum activities as in regular system of course delivery.

V. CONCLUSION

The study shows that the COVID-19 pandemic has a significant effect on the education of students in Bangalore, India. The shift went from high to average understanding, doubt clearance and interactive classes from pre to post lockdown whereas the technological involvement showed vice versa. The pandemic has given chance to students to be more involved in self development activities at home but the greater influence of social media has overpowered the activities of reading the exercising, resulting in mentally exhausted and unsatisfied students wanting to attain regular type of education system with curriculum including cultural participation, NCC, NSS, sports and other ventures.

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VIII. ABBREVIATIONS:

1. COVID-19 – Corona virus disease of 2019
2. NCC – National Cadet Corps
3. NSS – National Service Scheme

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